

(19) World Intellectual Property
Organization
International Bureau



(43) International Publication Date
7 July 2005 (07.07.2005)

PCT

(10) International Publication Number
WO 2005/061070 A1

(51) International Patent Classification⁷: **B01D 3/20**

(21) International Application Number:
PCT/EP2004/053633

(22) International Filing Date:
21 December 2004 (21.12.2004)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
03104883.8 22 December 2003 (22.12.2003) EP

(71) Applicant (for all designated States except US): **SHELL
INTERNATIONALE RESEARCH MAATSCHAPPIJ
B.V.** [NL/NL]; Carel van Bylandtlaan 30, NL-2596 HR
The Hague (NL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **KONIJN, Gerrit**

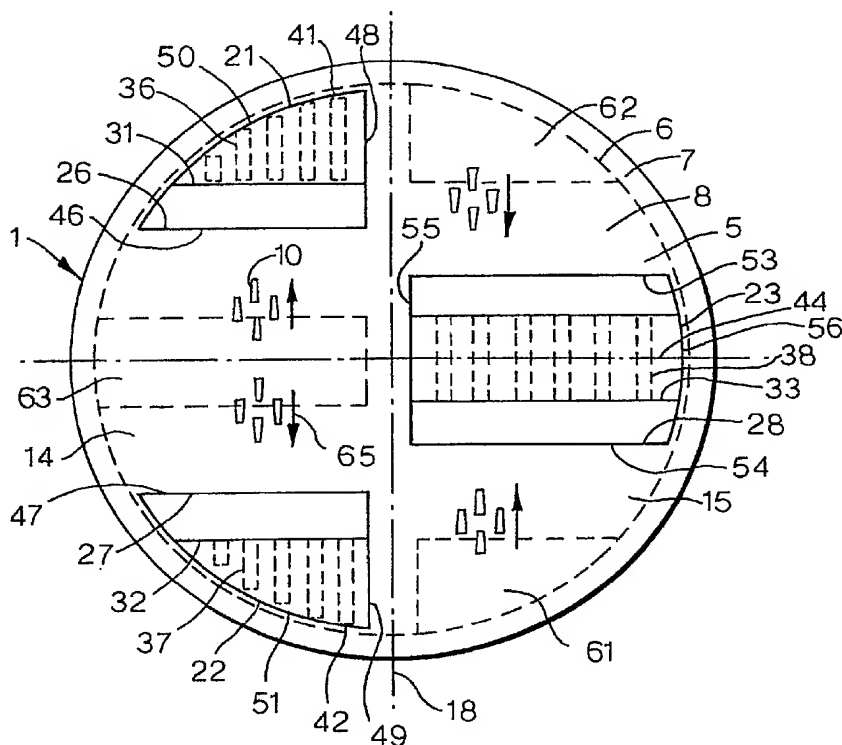
[NL/NL]; Badhuisweg 3, NL-1031 CM Amsterdam (NL).
SASTRY, Asheesh, Viswanatha [IN/NL]; Badhuisweg 3,
NL-1031 CM Amsterdam (NL). **VOETTER, Manfred,
Heinz** [AT/NL]; Badhuisweg 3, NL-1031 CM Amsterdam
(NL). **WHITT, Rubin, Keith** [US/US]; 834 Cohn Street,
Houston, Texas 77007 (US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN,
CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI,
GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE,
KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD,
MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG,
PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM,
TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM,
ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,

[Continued on next page]

(54) Title: GAS-LIQUID CONTACTING TRAY



(57) Abstract: A gas-liquid contacting tray suitable for horizontal mounting in a normally vertical column, which tray comprises a tray plate with substantially circular circumference and having top and bottom surfaces, which tray plate is provided with passages for gas between the bottom and the top surface, and on which tray plate two semi-circular tray sections are defined by a virtual diametrical line of the tray plate; and a total of three downcomers for guiding liquid from the top surface of the tray plate to below the tray, each downcomer extending from an inlet opening arranged in the tray plate to a downcomer outlet opening below the tray, wherein two of the downcomers are arranged in the corners of one of the semi-circular tray sections, and wherein the third downcomer is arranged substantially along a radius of the tray that is perpendicular to the diametrical line.



GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.